

## THE SUCCESSFUL ISOLATION OF SEX HORMONES FROM PLANTS—A CONCLUSION TO TWENTY YEARS OF RESEARCH

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In three previous articles published in the Journal of "The American Institute of Homœopathy" in 1940, 1941 and 1957, 1, 2, 3 we endeavoured to establish the fact that patients treated according to homœopathic indications in cases of dysmenorrhea or during the climacteric did as well, or frequently better, when *Cimicifuga* or *Pulsatilla* was used as when the natural or synthetic hormones, estrogen or progesterone, were given orally or by hypodermic.

When we commenced this work, we were associated with Thomas Hodge McGavack, both at the Flower-Fifth Avenue and Metropolitan Hospitals, and had a tremendous amount of clinical material to draw upon. We also had the assistance of Professor Linn J. Boyd, who as Head of the Department of Medicine at the New York College gave us the benefit of his advice whenever called upon. Both of these nationally known researchers agreed with our original theory, that eventually it would be shown that the remedies would contain steroids similar to, if not identical with, the hormones they replaced in the treatment of female endocrine dysfunctions.

A reference to the aforementioned articles would disclose a great many interesting clinical references. The time schedule does not permit us to go into great detail now, but we would like to give just one illustration from our Service at the Metropolitan Hospital to show how a typical case was completely relieved for more than three years, at which time our 'follow-up' ended, by the use of the indicated remedy.

Natalie C. was a brunette of Italian extraction, aged 29. She had been confined to a State mental hospital for 18 months and, following a year at home, was about ready to be re-certified

at the request of her parents, when the social service worker in charge of her case asked us to see if we could help her. She had an excellent basic education and was far superior in intelligence to the usual clinic patient. Her original certification had been for Dementia Praecox of the depressive type.

Her complaint was that her menses were irregular, coming at intervals of thirty-five to fifty-four days, starting with a brown stain the first two days, bleeding for the next three, and staining for four additional days. During all this time she had severe dysmenorrhoea commencing before onset and lasting throughout the period. An interesting complaint was "difficulty in concentrating, torpidity, tenseness and disturbed mentality" which lasted during the entire menses.

At the start of the study on this patient, urinary concentrations showed zero readings for estrogen after one hundred and thirty-four hours. Using the tincture of *Cimicifuga* in doses of five minims t.i.d., there was a concentration of 5.3 r.u./L. of estrogen within 37 days. All mental symptoms were alleviated and the cramps were so mild as to require no particular attention. These were confined to the first two days prior to flow. A dilution was next made using two minims of tincture in four ounces of water. Of this mixture, one teaspoonful was given after meals. Within two months all clinical symptoms disappeared and the urine test showed a normal concentration of 22.4 r.u./L.

From this point on our interest was mainly in determining the effect of potentization. We started with a dose of the 6x and for seven and one-half months gave one tablet twice daily. In all that time our patient had none of her earlier complaints, but did note that each month at the time of ovulation, she was more alert, awakening earlier and remaining awake for a longer period than usual. During that period of the month her senses all were more keen. Menses were regular, coming on every 28 or 29 days, lasting only 4 or 5 days, and the amount of flow was normal. There was absolutely no dysmenorrhoea. Recheck of the urine disclosed a persistent result of 22.4 r.u./L. of estrogen. Follow-up for more than three years showed improvement to be maintained.

Over the years the clinical cases have mounted until today they are numbered in the hundreds. Failures when remedies were given by others have always been traced to improper prescription. At this point we feel a review of the indications is in order before progressing to the meat of our paper. If we rule out surgical conditions of the pelvis and abdomen, the patients usually present one of two outstanding pictures. These are: Women presenting the combination of amenorrhea, oligomenorrhea, premenstrual and menstrual depression, and emotional instability are placed in the group calling for *Pulsatilla*. In the patients of a firm, thin, wiry build, whose menstrual cycles vary from 14 to 16 days, whose flow may be profuse or scanty, but invariably dark and clotted, and who present the symptoms of premenstrual tension, with or without menstrual mastalgia, *Cimicifuga* is the remedy of choice.

The study of the chemistry of any botanical remedy is very complex and up to recent times costs have been prohibitive. With the assistance of Rudolph B. Smith, Jr., who has been associated with our colleague, Garth W. Boericke, M.D., Professor at Hahnemann Medical College, we managed for the first time to obtain a fraction of *Pulsatilla* in a pure state. We knew that if we were dealing with a sterol, we had to use a fat solvent; but when ether and the many other common ones were tried, and later extracted with alcohol, they boiled off at a lower temperature than did the alcohol, hence our experiments were a failure. Mr. Smith was the one who saved the day after many years of disappointment. His knowledge of industrial chemistry, in which field he is a nationally known expert, enabled him to discover the solution which, once known, seems so very simple.

The tincture was placed in an agitator with a highly purified form of light mineral oil, and shaken continuously for three days. Next pure alcohol was used to extract the fraction from the oil and, by the usual method of fractional distillation, we obtained the first pure fraction of *Pulsatilla*. After this had been made up by Boericke and Tafel into 2x, 3x, 6x, 200th potencies, we tried each in turn upon patients to determine whether the effect was the same as we had formerly noted

when using the whole plant. To date, out of 27 cases which had previously received *Pulsatilla*, 26 had results just as good as formerly. In the one failure, we noted the nervous symptoms predominated and feel that the fraction did not contain the simile for the relief of that portion of the symptom complex. We found that the best and fastest results came from the use of higher potencies.

The accident to Dr. Boericke, combined with additional work thrown upon him, made continued cooperation by Mr. Smith impossible for the present. Thus we have had to work with another laboratory in order to extract the active fraction of *Cimicifuga*, which we have succeeded in doing and again have proved that the fraction is a sterol as in the case of the *Pulsatilla* fraction. Whether one is a true estrogen or progesterone is of academic interest. The important matter is that we have finally made the point we have striven to prove for the past twenty years. Clinically, *Pulsatilla* is of value in those cases where estrogen would be indicated and, likewise, *Cimicifuga* supplants progesterone. In a paper read before this group in 1951 at Atlantic City<sup>4</sup> we presented additional cases and indications to prove the close relationship clinically, but now we hope the chemical extraction of a sterol will prove to our brethren outside of our school the value, not just of these two remedies, but all of our great *Materia Medica*.

We have written a paper and hope shortly that it will be published in a national medical publication to acquaint our friends with this discovery. It has been interesting to note that so many of our remedies are being reported of late as new discoveries. If we can succeed in getting our side presented as well, perhaps it may lead to a better understanding of the principles we have fought for throughout our professional lives.

That we are not guilty of wishful thinking in announcing the isolation of sterols from plants may be discovered by reading the recent scientific literature. Monroe Wall<sup>5</sup> and his associates in November of 1957 published the results of studies of four thousand plants of the species known as Agave, Dioscorea, and Yucca. In these three groups they isolated steroidal sapogenins in the following proportions: Agave\* 60%, Dios-

corea 34%, and Yucca 80%. It is true that in most cases the amount was negligible but the work is being continued with the hope of discovering a cheaper source for the manufacture of sterols, as is already the case with the use of the wild yam to make cortisone.

More in our own field is the recent announcement in the magazine, *Medical Science*,<sup>6</sup> in which the U.S. Department of Agriculture tells of the isolation of a weak estrogen from three varieties of clover: ladino, alfalfa and strawberry clover. In their report, which covers work done at the Western Research Division in Albany, California, the Department states that the substance isolated is more powerful than any previously discovered plant source of estrogen, but less powerful than the synthetic stilbesterol. The name "*Coumestrol*" has been given to this newly discovered hormone.

It is our personal opinion that, in spite of the fact that homœopathically trained physicians are dying at a rate faster than converts are coming into the fold, the truth behind the Law of Similars will not be lost. As previously mentioned, new remedies are being discovered which are actually revivals of those we have known and worked with for a hundred years or more. The many alkaloids of ergot in small doses produce reactions similar to those of the original *Secale cornutum* in low potency; *Verotrum virile* and its alkaloids, as well as *Rauwolfia* are two others enjoying dual usage today. More and more use of *Belladonna* and its alkaloids in gastro intestinal complaints is reported in the literature, and so throughout the materia medica.

The wonder drugs leave one with the—"I wonder how long this one will last, before the next is announced" feeling. We personally remember when aspirin enjoyed that status and today it occupies a place in more than 90% of the medicine chests of the nation. In spite of warnings in no less a publication than the *Journal of the American Medical Association* that at least 10% of all individuals are sensitive to the drug, and that over 600,000 serious reactions with many deaths were reported in 1957 from its use throughout the United States, many doctors advise mothers to give "baby aspirin" to infants for

every illness, real or fancied. In our local county of Nassau, on Long Island, the Health Department reported six deaths of children from aspirin poisoning in the first six months of 1957. The same holds true of all the later miracle drugs down to the latest antibiotics and tranquilizers.

It is not our intention to claim that all medications not used by Hahnemann and his immediate co-workers are worthless, but we do feel that not sufficient investigation is done before releasing a deadly poison upon the innocent medical profession and their patients. Until the method of "Proving" as used in our school is adopted more generally, there is bound to be trouble. It has been brought out, time and time again, that animal experimentation is not a substitute for human clinical trials. We know that a minute dose of strychnine will kill a large dog, that a rabbit may eat *Belladonna* and thrive thereon, and that cats eat drugs that humans die from, and so on down the line.

It is not just the fault of the "other fellow" that more is not known about our school of therapy. The fault is equally ours. We have had too many among us who adopt the attitude that we, and we alone, are perfect, and need not spread the gospel to our brethren. Such an attitude is unworthy of any member of this Society. By our own example of carefully prescribing the indicated remedy in our hospital cases and occasionally in caring for the families of our non-homœopathic colleagues, we have won not only their respect but, more important, their interest. Many have joined the Homœopathic Medical Society of the State of New York as evidence of that interest and ask only for an opportunity to learn about our system of practice. The opportunity is ours, the time is ripe; let us continue to show the rationale behind our prescribing and the Law of Similars will never be without loyal followers.

#### BIBLIOGRAPHY

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